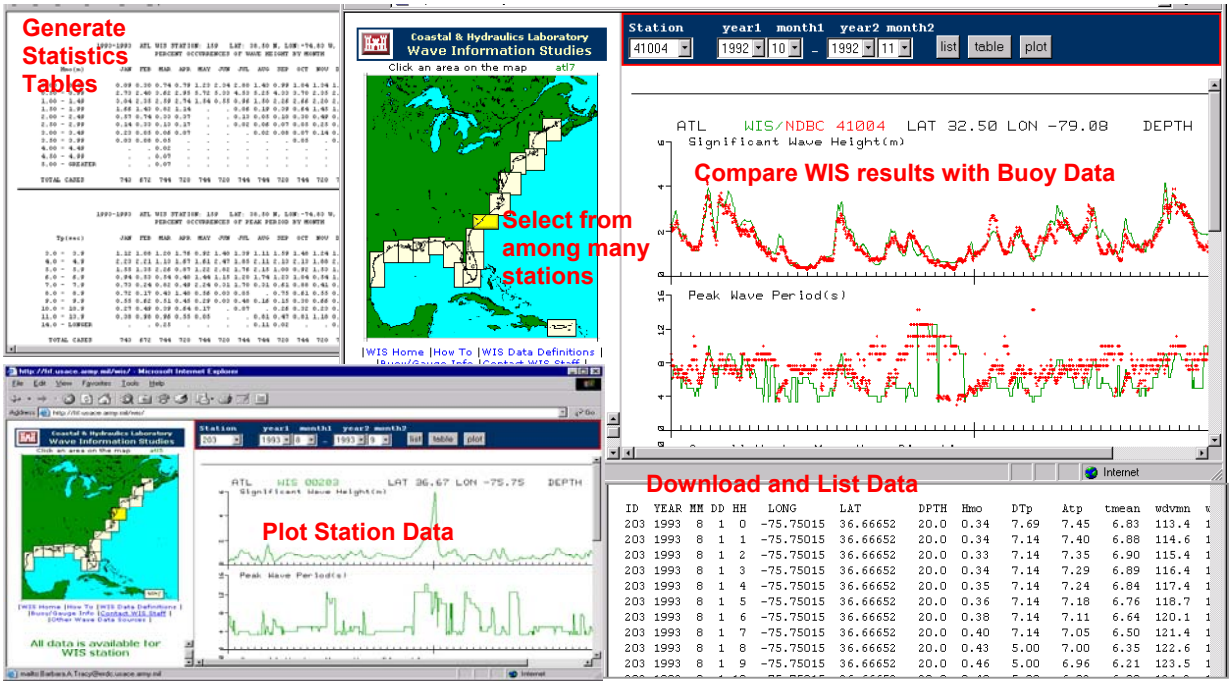
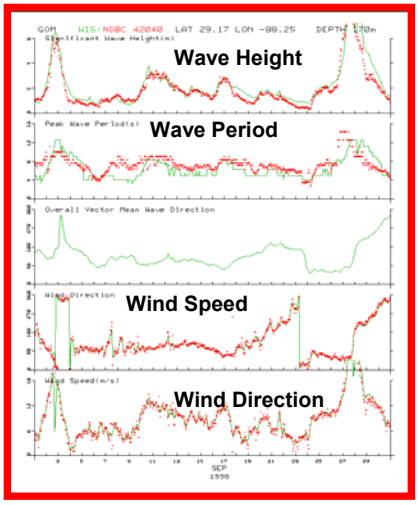
Coastal and Hydraulics Laboratory
Wave Information Studies (WIS)
Hindcast Wave Data for U.S. Coasts

WIS releases NEW website for 1990's Atlantic and Gulf of Mexico wave information GO TO http://frf.usace.army.mil/wis



ID	YEAR	MM	DD	HH	LONG	LAT	DPTH	Hmo	DTp	Atp	tmean	wdvmn
203	1993	8	1	0	-75.75015	36.66652	20.0	0.34	7.69	7.45	6.83	113.4
203	1993	8	1	1	-75.75015	36.66652	20.0	0.34	7.14	7.40	6.88	114.6
203	1993	8	1	2	-75.75015	36.66652	20.0	0.33	7.14	7.35	6.90	115.4
203	1993	8	1	3	-75.75015	36.66652	20.0	0.34	7.14	7.29	6.89	116.4
203	1993	8	1	4	-75.75015	36.66652	20.0	0.35	7.14	7.24	6.84	117.4
203	1993	8	1	5	-75.75015	36.66652	20.0	0.36	7.14	7.18	6.76	118.7
203	1993	8	1	6	-75.75015	36.66652	20.0	0.38	7.14	7.11	6.64	120.1
203	1993	8	1	7	-75.75015	36.66652	20.0	0.40	7.14	7.05	6.50	121.4
203	1993	8	1	8	-75.75015	36.66652	20.0	0.43	5.00	7.00	6.35	122.6
203	1993	8	1	9	-75.75015	36.66652	20.0	0.46	5.00	6.96	6.21	123.5

The WIS project produces a high-quality online database of hindcast, nearshore wave conditions covering U.S. coasts. The hindcast data provide a valuable source of decades-long wave data needed in coastal engineering design, at dense spatial resolution and at a level of temporal continuity not available from measurements. Updated hindcasts for the Atlantic and Gulf coasts, from 1990-1999, have just been completed. The hindcast wave conditions were produced using the latest updated version of the numerical ocean wave generation and propagation model, WISWAVE, along with state-of-the-art wind fields produced by Oceanweather, Inc., as a value-added improvement to AES-40 wind fields. Wave data for a dense network of output stations that follow 15 to 20-m depth contours along the coast are available. Data include hourly wave parameters: significant wave height, peak period, mean period, mean wave direction, and wind speed and direction. Parameter information can be easily downloaded for use as input into nearshore coastal process models. Directional spectral information at 3-hour intervals is also available from the WIS staff.



WIS DATA QUALITY - 1990-99 Gulf and Atlantic WIS information compares well with all available NDBC buoy measurements. The figure to the left shows a comparison of WIS results with measurements from NDBC buoy 42007 (off Louisiana) for the month of September, 1998. Hurricane Earl, a Category 2 hurricane moved over this area August 31-September 8. The plot also shows Hurricane Georges, a category 4 hurricane which made landfall nearby at the end of September. Note the excellent agreement for both waves and winds.

ONGOING ACTIVITIES (2003) - 1-year test hindcast for the Pacific Ocean; 1980-1989 hindcast for the Atlantic Ocean; new parallel processing routines for state-of the–art computer efficiency in hindcast production

NEXT-YEAR ACTIVITIES (2004) - test hindcasts for the Great Lakes; 10-yr hindcasts for Atlantic Ocean and Gulf of Mexico, 1980-1989; Web site improvements including more data processing and analysis capabilities

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